

## APPARATUS AND METHODS FOR MAGNETIC SEPARATION

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### RELATED APPLICATIONS

[0001] This application is a division of Application  
No. 09/376,686, filed August 18, 1999, <sup>now US Patent 6,361,749</sup> which claims  
the priority of US Provisional Application  
No. 60/098,021, filed August 18, 1998.

### FIELD OF THE INVENTION

[0002] The present inventions relates to the field of  
bioparticle isolation. More specifically, the  
invention provides novel magnetic separation devices  
and methods for isolating magnetically labeled  
substances of interest from a non-magnetic test medium  
by means of high gradient magnetic separation (HGMS).

### BACKGROUND OF THE INVENTION

[0003] Magnetic separators and methods of separation  
of magnetic particles from non-magnetic media have  
been described for use in a variety of laboratory and  
clinical procedures involving biospecific affinity  
reactions. Such reactions are commonly employed in  
testing biological samples, such as bodily fluids like  
blood, bone marrow, leukapheresis products, spinal  
fluid or urine, for the determination of a wide range  
of target substances, especially biological entities

10063712-020602